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# Factors influencing routine cognitive impairment screening in older at-risk drinkers: Findings from a qualitative study in the United Kingdom

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## Abstract

Cognitive Impairment (CI) screening is recommended for those engaged in harmful levels of alcohol use. However, there is a lack of evidence on implementation. This paper explores the barriers and facilitators to CI screening experienced across a service specifically for older drinkers. The findings draw on data gathered as part of an evaluation of a multilevel programme to reduce alcohol-related harm in adults aged 50 and over in five demonstration areas across the United Kingdom. It is based on qualitative interviews and focus groups with 14 service providers and 22 service users. Findings are presented thematically under the section headings: acceptability of screening, interpretation and making sense of screening and treatment options. It is suggested that engagement with CI screening is most likely when its fit with agency culture and its purpose is clear; where service providers have the technical skills to administer and discuss the results of screening with service users; and where those undertaking screening have had the opportunity to reflect on their own experience of being screened. Engagement with CI screening is also most likely where specific intervention pathways and engagement practices can be accessed to respond to assessed need.

## KEYWORDS

barriers, cognitive impairment, implementation, screening

## 1 | INTRODUCTION

The link between Cognitive Impairment (CI) and alcohol use is unclear but heavy drinking has been implicated in alcohol-related brain damage and the onset and development of CI in older adults

(Bates, Bowden, & Barry, 2002; Panza et al., 2012; Ridley et al., 2018; Savage, 2014; Topiwala et al., 2017). Allan, Kemp, and Golden (2012) found that 52% of adults in a residential programme for problem substance users had CI, among which 12% were diagnosed as moderate to severe. Similarly, Monds et al. (2017) found that nearly

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two-thirds of adults aged 50 and over attending a drug and alcohol treatment service showed signs of CI.

The National Institute for Clinical Excellence (NICE) (2011) suggest more than 50% of adults with CI later develop dementia. Conversely, some studies indicate that the progression of alcohol-related CI is not so well understood and fewer individuals with such CI go on to develop dementia (Ray & Davidson, 2014; Steenland et al., 2008). In many cases, and especially where the condition is related to thiamine deficiency as a result of a poor diet, there is evidence that reduced drinking may halt or arrest cognitive impairment which would then promote greater independence and social functioning (Peracino & Pecorelli, 2016; Sabia et al., 2018). CI is associated with poorer appointment attendance, treatment adherence and outcomes, so screening for the condition may allow interventions to be tailored more appropriately (Grohman & Fals-Stewart, 2003; Huckans et al., 2013; Marceau, Lunn, Berry, Kelly, & Solowij, 2016).

Screening older adults for the presence of CI is not standard practice (Apostolo et al., 2016). In the United States, for example, screening of older adults for CI is not advocated as a matter of routine by the Preventive Services Task Force (Moyer, 2014; Rahul & Draper, 2018; USPSTF, 2014). Conversely, in the United Kingdom, the Royal College of Psychiatrists (2011) recommend routine cognitive impairment screening of older people where substance misuse is reported. National Institute of Clinical Excellence guidance on the assessment and management of harmful drinking and alcohol dependence in the United Kingdom also indicate that cognitive impairment screening should be completed in the case of adults referred to specialist alcohol services who score more than 15 on the AUDIT screening tool (NICE, 2011).

CI screening of older populations may give rise to concerns that instruments will fail to distinguish between CI and normal age-related cognitive decline (Justiss et al., 2009). It may give rise to concerns that a positive result will cause distress to service users (Volicer, 2016) and underpin a fatalistic attitude about the future (Van der Aalst, Van der Bergh, Willemsen, De Koning, & Van Klaveren, 2010). Conversely, it may reflect worries that a negative result will be interpreted by a service user as a sign that their use of alcohol is free of consequences. Screening is primarily of benefit when interventions exist that can mitigate otherwise harmful outcomes, so screening may be experienced as problematic in the absence of such possibilities.

The most widely used CI screening instruments have been designed to be administered by service providers who have not received neuropsychological training (Copersino et al., 2012). They typically take approximately 10–15 min to administer and assess attention, memory, verbal fluency, language and visuospatial abilities (Hsieh, Schubert, Hoon, Mioshi, & Hodges, 2013). The Montreal Cognitive Assessment (MoCA) has been shown to be effective in identifying cognitive impairment among adults who misuse alcohol and drugs (Copersino et al., 2012). The validity and reliability of CI screening instruments have been critiqued (Cullen, O'Neil, Evans, Coen, & Lawlor, 2007). Some quantitative studies have investigated the clinical utility of implementing cognitive screening in primary

### What is known about this topic?

- The link between Cognitive Impairment (CI) and alcohol use is unclear
- Heavy drinking has been implicated in alcohol-related brain damage and the onset and development of CI.
- Screening for CI is recommended by NICE for adults engaged in more harmful levels of alcohol use

### What this paper adds

CI screening is most likely to be experienced as useful, when;

- Its fit with agency priorities and culture is clear.
- When service providers have the technical skills to administer a relevant instrument
- When service providers have had the opportunity to reflect on their own performance

healthcare settings (Borson et al., 2007; Gillen, Kranzler, Kadden, & Weidenman, 1991). In Wadd et al. (2013), adopted a questionnaire-based approach to explore the extent and nature of cognitive impairment in older people receiving alcohol services; the challenges staff face when working with clients with cognitive impairment and the extent to which older people with CI find screening acceptable. However, to our knowledge, no published study has adopted an interview-based approach to exploring how screening is implemented by staff in a non-clinical service setting. Screening in such settings may be associated with a number of challenges linked to need and administering, interpreting and following up results. In light of the likely expansion in CI screening in substance misuse services over the coming years, this article adds to the knowledge base about factors which influence screening practices in services for older drinkers.

## 2 | METHODS

In this section, we report on the methods used with reference to the Consolidated Criteria for Reporting Qualitative Research (COREQ; Tong, Sainsbury, & Craig, 2007). The context for this research was a non-clinical multilevel programme in the United Kingdom to reduce alcohol-related harm in adults aged 50 and over, delivered over a 5-year period (2015–2020) and funded by The Big Lottery. In five demonstration areas across the United Kingdom (one in Scotland, Northern Ireland and Wales, two in England), a programme of activities and non-clinical interventions were delivered to support health and social-care services respond to risky drinking by adults aged 50 and over (Seddon et al., 2019). Work streams included activities to: raise awareness of risky drinking among older people; help this group develop community ties to build resilience against the sense of isolation and loss that can attend the process of ageing; motivate, advise and support those with

higher AUDIT scores (in one to one and peer group sessions) to make changes in the use of alcohol; train service providers to identify and respond to problem drinking in the over 50 s. Four universities from each of the UK nations were contracted between 2015 and 2020 to undertake independent evaluation of the initiative, and provide feedback to the service as means to improve practice.

In relation to service users with higher AUDIT scores, staff undertook CI screening using the MoCA. This instrument is scored on a scale of 0–30, with a score of 26 and above indicating unimpaired abilities. The impetus for exploring engagement with CI screening arose as members of the research team interviewed service providers and service beneficiaries and explored aspects of practice and service user experience. One emerging finding was that there were significant variations across the demonstration areas in relation to screening completion rates. Hence, completion rates varied from 47.5% to 29.5%.

To explore the experience of undertaking CI screening, a small convenience sample of service providers and users was recruited from two demonstration areas with differing completion rates for the MoCA. All service providers responsible for administering the MoCA in these two areas were invited to the study and subsequently one focus group was conducted in each area ( $n = 6$ ;  $n = 8$ ). Service users were recruited by service providers who nominated individuals for the study if they had experience of being screened for CI. This resulted in 10 individual semi-structured interviews being carried out. In addition, an existing service user group in each of the two demonstration areas was approached and invited to take part in the study. Only one group could be enrolled into the study in the available timeframe and comprised 12 members. There was some non-attendance at the focus groups and some service users were approached but were not ultimately involved in individual interviews. Where this was the case, this was reported as being related to the practicalities of being available to take part.

Ethical approval for the study had been obtained from the outset from the ethics committees at each of the four Universities evaluating the project. Research assistants were involved who had been recruited for the duration of the evaluation based on their ability to engage with older people. During interviews and focus groups, prompts were used to stimulate discussion. These focused on experiences of screening; knowledge of its purpose; potential ability of service providers and other organisations to respond to signs of CI and barriers/facilitators to screening. It was explained to all respondents that participation was voluntary and would be anonymous and have no bearing on either their employment (service providers) or the management of their case (service users). However, it was also explained that confidentiality would have to be broken if during the course of an interview, researchers became concerned about a potential associated with a risk of harm to self or others.

All interviews were audio-recorded, transcribed verbatim and anonymised before they were shared with the entire research team. Two of the authors used Braun and Clarke's (2006) method of thematic analysis to code and analyse the data. This flexible and systematic approach is commonly used in applied health research. Transcripts were coded and analysed in terms of key issues of relevance to the research. Data of specific interest were highlighted,

and then, the lead authors discussed the emergent themes with the wider research team, looking for consensus in interpreting the data. In presenting the findings, we draw selectively on accounts from the sample to illustrate the point being made. To protect anonymity, findings are presented using data extract codes. Service users are coded SU1–10. Contributions from service users deriving from the focus group are coded SUFG. Contributions from service providers deriving from the focus group are coded SPFG1 and SPFG2.

### 3 | FINDINGS

#### 3.1 | Acceptability of screening: testing

Some staff reported no problems integrating CI screening into their working practices and were 'generally confident' (SPFG1) or 'comfortable' (SPFG2) in its administration. For these workers, use of the MoCA was unremarkable. However, for others, screening could be experienced as interrupting the normal flow of engagement. For example, one worker made the following observation:

It can raise uncomfortable and unwanted associations with unfair and ... intrusive testing that they may have had at school or since

(SPFG1)

Another respondent suggested 'there are certain similarities, I think there are memories of IQ testing' (SP2). In the following extract another service provider shows concern that the screening process will be perceived like a test,

Yeah I think it can increase, their anxieties definitely peaked at doing some of the, but I don't use the word test. I change my language. I say assessment

(SPFG1)

Next a service user recalls when the right word to use was also a matter of concern:

At the end she gave me a test. Well, 'it's not really a test', she says. 'It's an assessment. Don't regard it as a test'

(SU1)

Perceptions that screening was disorientating made providers 'uneasy' (SPFG1) and negative about the screening process.

#### 3.2 | Acceptability of screening: distress and avoidance

Some service providers perceived that screening could distress service users and perhaps unsurprisingly that was considered most likely when a service user struggled to complete the MoCA:

It can be uncomfortable because they're very clearly seeing that they're not able to draw the cube (SPFG1)

I know that they've really struggled with it, and I don't like putting somebody in that situation

(SPFG1)

In response to this, although practice guidelines suggested the MoCA should be offered to all service users, screening could be avoided or terminated early:

I do not now do it on people who I feel it would just make them really uncomfortable (SPFG1)

They can become stressful and then I stop

(SPFG2)

In other instances, the potential for distress was managed by approaching the process of screening as a minor bureaucratic or administrative exercise. For example, one service user recalled:

I'd say it was just the case of answering the questions and getting on with it. There was no discussion about, well this is to check on this and this is to check. So, no I don't really know what the whole background of the cognitive test is all about

(SU2)

Moreover, service providers could seek to render the MoCA more palatable by presenting it to service users as simply a fun activity or quiz which they could aim to pass or fail. This was generally experienced in a positive way by service users:

So yeah, we try and make a bit of light of it for some people because that helps it

(SPFG1).

We sort of almost presented it like a little bit of a game. It was like doing a crossword or something at the end of a lot of quite plodding questions. It was a bit different (SPFG1)

As useful as the last two approaches might have been in defusing anxieties, it was not always the case that service users were then engaged in a meaningful debate about the purpose of undertaking CI screening. Referring to a relative's dissatisfaction with screening, one service user suggested:

I would say, from people I know that are my peer group, I don't think there'd be an issue around being, having an assessment, but if people are ... hiding it from themselves, when they have no insight .... Then,

they will be angry about having that evidence forced upon them

(SU4)

### 3.3 | Interpreting and making sense of screening: sharing and explaining results

Linked to service providers concerns about distressing service users, some service users reported little engagement in meaningful discussion about their performance on the MoCA and/or the implications and/or limitations of screening as far as their own use of alcohol was concerned. Some reported not being told what their score was and some simply reported they had 'passed the test' and did not know their score.

Practices were described whereby the relevance of the MoCA might just be neutralised. For example, two service users recalled the following exchanges with service providers after completing the MoCA:

I say 'look, it's not an intelligence test, it's nothing to worry about, it really is just to see where you are with maybe memory recall' (SPFG2)

You don't mind making mistakes, but she was 'don't beat yourself up about it. Not everybody gets it right' so, she said 'it's no big deal'

(SU7)

In the first extract, a service provider describes practice which seeks to pre-emptively manage a symptomatic assessment by relegating the MoCA to the status of an insignificant memory test. In the second, a service user recalls that their symptomatic performance was rendered 'no big deal'.

Some service providers shared the results of screening in a way that appeared to be purposeful in terms of agency objectives associated with reducing alcohol-related harm. So, for example, one respondent reported in the following way on their practice:

One of the benefits for me is talking about brain health with the clients, and having a point to discuss the physical or psychological health, their cognitive health and the effects of alcohol, so giving them more impetus and information on why it would be good for them to manage or moderate their drinking or going abstinent, and I'm sure everyone else would agree, flagging this, so if there is an issue, talking to their GP and maybe getting an early intervention or some kind of intervention ..... So, generally speaking, it'll allow me to open up about that and tell them about the effects on their memory and aspects of their memory

(SPFG1)

However, some service users who scored highly on the MoCA erroneously understood that the screening provided them with a CI diagnosis. Accordingly, as in the following extract, important additional indicators of CI (assessment of family and friends) could be trumped by an 'above average' CI result:

As I say, my close friends and people were getting a bit sort of, not cross but frustrated, because I didn't seem to be able to hang on to what I was being asked to do or told. So, when that was suggested, would I be happy to do that? I thought, 'Oh yes, let see.' ... Everyone was surprised that I came out ... My close friends were surprised I'd come out with this above average result

(SU5)

### 3.4 | Interpreting and making sense of screening: personal experience

Some service providers seemed to hold the view that the results of screening were not meaningful. Here, such assessments seemed to relate to personal experience with the MoCA. As part of the process of becoming familiar with the screening process, service providers had been encouraged to complete the MoCA themselves. Their experience of doing this could then become the fulcrum for understanding the service user experience and, arguably, invest them emotionally in future screening events:

I myself would find some of the questions quite difficult, and I think a lot of people I work with do, there are certain questions which people really struggle with, whether they're drinking a lot or not, just because, I mean, the subtracting seven from 100, from whatever, from whatever, I mean that would take me ages to do that

(SPFG2)

In the following extract, another service provider offers an account of the service user experience of CI screening which is linked to their own performance.

I scored under when I did it ... I think some people panic and your mind does go blank when you're trying to do core things

(SPFG2)

### 3.5 | Treatment options: onward referrals

Most service providers did not consider that the outcome of CI screening would make a difference to treatment trajectories.

Referrals to external agencies appeared to be followed by the default assumption that impairment would be linked to alcohol consumption. Accordingly, the primary treatment protocol would involve reduced alcohol consumption or abstinence. Thus, an external referral by a substance misuse service in relation to a CI assessment would simply be followed by a return referral for a substance misuse service.

Memory clinics were said to not usually accept referrals for people with alcohol problems until they have significantly reduced their drinking. Practitioners told us that they advised service users who showed signs of cognitive impairment to speak to their GP, but this was not reported as advice that was often followed:

I've only had one person from the whole time we've been doing it, who actually said 'I think I'm going to go to my GP, because I'm quite surprised at how difficult I found the recall part

(SPFG1)

The reaction of GPs could be variable and so one provider said 'In the beginning I would try and contact GP's but I give up' (SPFG2). In some cases, practitioners accompanied the service user to their GP appointment, but not all GPs were sympathetic:

He was really brutal with the client, like 'your dementia's not going to get any better, so you need to stop drinking', and it was like 'oh god', you know, 'wonderful

(SPFG1).

### 3.6 | Treatment options: Adapting the service

Service providers were unsure of how to adapt routine services in light of CI being indicated. The results of screening were not perceived to readily map onto clear prescriptions for subsequent practice. In relation, to a screening score of 15 (moderate impairment), for example, particular adaptations might need to follow where that score derives primarily from failures at recall, as opposed to where other impairments, for example, visuospatial are more prominent. Service providers reported various challenges in engaging and working with those showing signs of CI:

And also with the scoring and people say they, at the bottom it's 26 is normal, and then under that it's like, well, is everyone who scores under 26 not normal and what does that mean? How is the scoring worked out and what does that tell you?

(SPFG1)

In the absence of pathways that were sensitive to assessed need, service providers were pessimistic about the value of the screening process and result:



There's no real benefit from doing the MoCA ... Because even sometimes when you say, 'oh, you know we would advise you with this score to maybe go and talk to your GP,' they won't (inaudible) That is just a fact that most of the time the memory clinic have gone 'you've got to get help from some other service to reduce your alcohol before we will work with you'

(SPFG2).

## 4 | DISCUSSION

Some service providers did not consider that integrating CI screening into their working practices was a problem for themselves or for service users. However, it was approached anxiously by others who perceived it interrupted the flow of conversation and could confuse or distress service users. Compounded in some instances by lack of knowledge or skills and concerns over their own screening results, some service providers did not present themselves as able to convey the results of CI screening to service users in a way that might promote the objective of reducing alcohol-related harms. Subsequent to screening, most service providers struggled to identify ways of adapting interventions to respond to the impairment being indicated or to access follow-up health assessments or interventions.

It would be a matter of some regret where our article to be understood as castigating one service provider. The challenges in implementing CI screening that we report in this paper are unlikely to be unique to one setting. We came across examples of the MoCA being applied thoughtfully and constructively and respondents shared their experiences to promote greater understanding about the advantages and challenges associated with CI screening.

One way of understanding service providers' avoidance of and concerns about screening is that it required them to take a more dominant role during an interview and to objectively assess need in a formal and structured manner. Such a role and approach to engaging with service users is commonly adopted in clinical settings and is associated with the medical model of practice. However, in many non-clinical settings, a social model of practice dominates so that practitioners provide support and encouragement to people in setting their own goals for change. Routine working practices, therefore, revolve around continuous dialogue about needs and negotiation over goals. In such contexts, CI screening could be experienced as interrupting the normal flow of engagement, requiring service providers to adopt a diagnostic mindset and to position themselves in the 'expert' role.

As might be expected, being screened for CI caused anxiety for some service users. Some service providers, however, also exhibited anxiety around screening and, in response, engaged in such practices as avoiding or neutralising the results of screening. In a range of settings, patient-provider interactions around alcohol use and other

sensitive health-related topics have been associated with discomfort and avoidance (McCormick et al., 2006). This can be linked to the challenges associated with screening for health-related conditions while avoiding causing distress to service users.

Neuropsychological training may not be a necessity to engage in CI screening, but the way a screening instrument is administered and then results are conveyed to service users is likely to have significant implications for the future. Studies in the field of medicine highlight that there is nothing automatically damascene in learning about impaired health. Whether a service user goes on to adopt more healthy behaviours following a diagnosis of impaired health is associated with how skilled a practitioner is in conveying the implications of the findings and promoting a sense of hope. Parkes, Greenhalgh, Griffin, and Dent (2008) found that knowledge of impaired lung functioning as a result of screening, for example, could act as an incentive for some patients to quit smoking. Conversely, it was also found that screening could be associated with a fatalistic outlook towards life and no change in smoking behaviour by others. How health news is conveyed seems crucial and although breaking 'bad' news is well known to be stressful, it is also well known that that capacity in that area can improve with training (Ptacek & Eberhardt, 1996).

Our findings highlight the potential for service provider's own experiences with the MoCA to also influence their perceptions and emotional response to cognitive screening. General population estimates of the prevalence of CI range from 5% to 36% (Sachdev et al., 2015). In addition to this, 25.7% of adults in England regularly drink over the Chief Medical Officer's low-risk guideline. Substance misuse services have a praiseworthy history of employing individuals who are recovering from substance misuse (Doukas & Cullen, 2011). In this context, it would be surprising if some service providers in substance misuse service settings administering the screening did not find cause for concern in their own performance on the MoCA. There is evidence that for lifestyle choices such as smoking and exercise, physician's own habits influence their advice to patients (Brotons et al., 2005). For example, smoking physicians are less likely to initiate smoking cessation interventions for patients than non-smoking physicians (Meshefedjian, Gervais, Tremblay, Villeneuve, & O'Loughlin, 2010; Pipe, Sorensen, & Reid, 2009). The threshold for advising patients to cut down on alcohol use is also higher for physicians who drink alcohol (Gieresson, 2011). CI screening behaviour may similarly be sensitive to personal experience of the screening process. In a range of contexts where the potential for personal experience to influence practice exists, the advantages of creating space for practitioners to engage in reflective conversations have been noted (Ferguson, 2018). In the present context, such conversations would allow for practitioners to more formally explore their own performance on a screening test and the implications that might follow from that for their practice.

Our research suggests service providers did not feel optimistic that screening would make a difference to treatment trajectories. Referrals to external agencies appeared to be followed by

the default diagnosis that impairment would be linked to alcohol consumption. Accordingly the primary treatment protocol would involve a return referral for the purposes of promoting reduced alcohol consumption or abstinence. Such a state of affairs renders CI screening purposeful only in so far as its results may be associated with insight, or amendments to the service delivery, that might otherwise not have arisen. However, service providers did not perceive themselves to be informed on how to adapt routine services in response to signs of CI. Nonetheless, adaptations to practices could be implemented in the case of those who show signs of CI including: providing prompts for attending appointments (e.g. text prompts); providing summaries of sessions or handouts or worksheets; offering shorter but more frequent sessions; involving supportive family or network members in interventions.

Following on from this study, service providers in the setting under consideration here have been engaged in further training, skills building and reflective conversations around the purpose and potential of MoCA screening. Reflective conversations, in supervision and routine meetings, focus on how staff experience using the MOCA and best practice in relation to conveying the results of the MOCA to service users. Within teams, discussions are taking place in relation to how knowledge of specific impairments, for example, spatial impairments, should impact on practice and what adaptations could be applied. In a parallel development, to ensure a more consistent approach to screening, a standardised training and certification programme will become mandatory within all organisations administering the MoCA from September 2019 onwards.

The limitations within this study include a relatively small sample size and the use of service providers to recruit service users for interviews and focus groups. The former limitation prevents generalisation of the findings. Qualitative research, however, is not concerned with generalising its findings beyond the sample used (Guba & Lincoln, 1994). It is concerned with understanding what people say and developing insight into some of the mechanisms that might impact behaviour. Thereafter, as Greenwood and Levin (2003, p. 152) argue, generalisation becomes an active process of reflection in which 'involved actors must make up their minds about whether or not previous knowledge makes sense in the new context'. The risks in using gatekeepers to identify and engage a convenience sample of service users are that they could potentially select participants who are compliant and positive about the services provided. However, our respondents were not uniformly positive about CI and provide some critical insight into how the screening process was experienced.

In light of the likely expansion in CI screening in substance misuse services over the coming years, this paper adds to the knowledge base about the factors facilitating and influencing screening practices in services for older drinkers. It is suggested CI screening is most likely to be implemented when its fit with agency culture and its purpose is clear. Moreover, when service providers have the technical skills to administer screening, have

received training on how to convey results motivationally and the opportunity to reflect on their own performance. Finally, CI screening is also most likely to be implemented where alternative engagement practices can be identified that respond to assessed need and specific intervention pathways for follow-up service exist.

## CONFLICT OF INTERESTS

No conflicts of interest to declare.

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